

Chapter 9

Management and Leadership

Learning Objectives

At the conclusion of this chapter, the reader will be able to:

- Contribute to organizational strategic planning (e.g., measure performance against organizational goals)
- Assess the organizational environment (e.g., corporate culture, values and drivers)
- Forecast technical and information needs of an organization by linking resources to business needs
- Develop and implement an IT strategic plan and departmental objectives that align and support organizational strategies and goals
- Evaluate performance (e.g., SLAs, goal/performance indicators, systems effectiveness)
- Evaluate effectiveness and user satisfaction of systems and services being provided
- Promote stakeholder understanding of information technology opportunities and constraints (e.g., business and IT resources, budget, project prioritization)
- Develop policies and procedures for information and systems management
- Comply with legal and regulatory standards
- Understand and comply with the organization's ethical business principles
- Employ comparative analytics (e.g., indicators, benchmarks)
- Prepare and deliver business communications (e.g., presentations, reports, project plans)
- Facilitate group discussions and meetings (e.g., consensus building, conflict resolution)
- Provide consultative technology services to the organization

- Develop educational strategies for the information and management systems function
- Maintain organizational competencies on current IT technologies and trends
- Apply effective risk management to internal and external processes (e.g., risk assessment, risk mitigation)
- Maintain effective and ethical working relationships with internal and external stakeholders (e.g., clinicians, vendors, partners)
- Present interpretations and recommendations of data analyses to decision makers
- Employ organizational change management techniques in support of solution implementation
- Define roles, responsibilities and job descriptions for healthcare IT functions
- Evaluate staff competency in information and management systems skills
- Manage projects and portfolios of projects
- Manage contractual agreements with vendors and partner (e.g., contract cost, schedule, support, maintenance, performance)
- Manage budget and financial risks

Introduction

Management and leadership skills are critical for the success of healthcare information technology (IT) organizations. Leaders and managers are expected to interact with other management and employees at all levels within an organization. This requires expertise in planning, communicating, reporting, forecasting and understanding all intricacies of healthcare regulation and policy. Leaders in healthcare IT are expected to have ethical working relationships with both internal and external stakeholders. Many organizations have implemented program management offices (PMOs) and this chapter covers managing projects, portfolios and change management. This chapter also reviews facilitating meetings, understanding roles and positions in healthcare IT and developing educational strategies for IT teams. Excellent leadership and management skills are necessary in all aspects of the work we do.

Participation in Organizational Strategic Planning

Leaders are responsible for setting the strategic goals and priorities for the company, division, department and new initiatives. A strategy is a formal or informal plan of action to achieve a goal. Regardless of where an organization is today, its strategies focus on where it would like to be at some point in the future. To outline and explain its strategies, an organization typically will use one or a series of statements that will be published for the benefit of the employees and customers. These statements express the mission, vision, values and goals of the organization.

Mission

The mission is a statement of why the organization exists—its purpose. Mission statements can vary from simple and concise to complex and hard to understand. The best mission statements are those that can be easily understood and remembered by any member of the organization or those that may be customers of your organization. Once read, it is not easily forgotten.

At the organizational level, it is typically the chief executive officer (CEO) and board of directors who set the mission of the company. The mission does not change with any regularity unless the business of the company or direction of the industry is changing as well. Nevertheless, each employee of the company has a responsibility to understand the mission to be sure that as they are evaluating their daily work, they can tie that work to the mission of the company.

Vision

A second expression that a company uses is the vision statement. A vision is the company statement that defines where it wants to go or what it wants to be. The vision is what the company is striving to achieve as it completes the daily work, a futuristic perspective. The CEO and board also typically set the vision. Depending on how far the vision reaches into the future, it may be altered with more regularity than the mission.

Values

The addition of values to corporate ideologies is much more recent than mission and vision. A list of values allows individuals to understand what the company supports and appreciates most. Values are often presented in a list that individuals can compare against their own personal values, as well as the values that are built into the activities they undertake at work. Examples of a healthcare organization's values might include compassion, service and respect. Employees should use the values as guides for their behavior at work and assess whether the values align or conflict with your work assignments. If an initiative lacks alignment or it conflicts with at least one value, it should be called into question. Values also reflect the corporate culture in the organization. Corporate culture is an all-encompassing set of attitudes, goals and beliefs about working for the organization that all employees accept to be true. Healthy corporate culture is usually a set of positive feelings about working for a specific company.

Goals

Goals are the measures to support vision accomplishment. The list of goals must be SMART: specific, measurable, attainable, relevant and time bound. Examples of organizational goals might be breaking even on Medicare reimbursement,

leading in clinical quality and employing primary care providers of choice for the community. Clearly articulated goals that support the mission and vision serve as guides against which to measure accomplishments of the organization.

Organizational Environment

Every department of a large organization can benefit from having a formalized plan that demonstrates how the work being performed aligns with the strategic goals and objectives of the organization. The complexity and detail of such a plan will vary by organization, as well as by the size and complexity of a department. For very small information management and systems departments, the question that arises is whether a full-fledged strategic plan is appropriate. A plan with objectives is a good idea regardless of the organization's size.

In many organizations, it will be satisfactory to create a table or spreadsheet that crosswalks the organizational vision and goals down through each of the individual projects or initiatives being worked on within a department or area. Companies often engage leaders in formal governance and leadership committees to promote understanding of the potential projects that may be coming in the next 12–18 months. A detailed plan is then created for that time period. Detailed planning much beyond 18 months out, other than for routine replacement, may be less valuable given the rapid changes in the IT industry.

Maintaining a project crosswalk provides a visual summary of the initiatives being handled by an area of service. This crosswalk can then be used within the department and at administrative review sessions to demonstrate the linkage between vision, goals and projects. Additionally, this same tool can serve as a link to the detailed work plans and project updates that are maintained by staff. In [Figure 9.1](#), you can see how a series of projects are weighted by scoring each

	Organizational goals and priorities	Exceptional care	Effective and efficient use of resources	Strategic growth	Exceptional experience	Nation leading research and education	End user experience	Innovation	Sites impacted	Score	Relative rank
	Weight	29.00%	24.00%	14.00%	9.00%	9.00%	5.00%	5.00%	5.00%		
Index	Request									0–9	
	Example: Enhanced privacy	1	3	3	9	1	1	1	1	2.48	28
1	Home care/hospice	9	3	1	3	1	3	3	9	4.48	15
2	Transplant	9	9	1	3	9	3	3	1	6.34	5
3	Mobile devices	1	3	1	1	1	9	9	9	2.68	26
4	Nurse triage	9	9	1	3	1	9	3	9	6.32	7
5	Surgical clinic outreach	9	3	1	3	1	9	1	1	4.38	16
6	Anesthesia IntraOp U/S/R	9	3	1	1	1	3	1	3	4	18
7	EKG upgrade	3	3	1	1	1	9	1	9	2.86	25
8	Remote hospital growth	9	9	1	9	1	3	1	1	6.06	8
9	Remote clinic growth	9	9	3	9	1	3	1	1	6.34	6
10	Health clinics	9	3	3	9	3	3	1	1	5.08	13
11	HR system	3	9	3	1	9	3	9	9	5.4	12
12	MFIM ClinDoc tools	9	9	1	3	1	3	1	1	5.52	11
13	Affiliate epic care link	1	3	3	9	1	3	9	9	3.38	22
14	CPM upgrade	9	9	1	1	1	9	1	9	6.04	9
15	Organizational analytics	9	9	1	1	9	1	9	9	6.76	1

Figure 9.1 Project rankings based on organizational goals and priorities.

against the organization's goals and priorities. The resulting score and relative rank of each project is calculated, can be shared and helps provide objectivity to project priorities.

Forecasting Technical and Informational Needs of an Organization

Leaders in healthcare IT aid and provide direction in support of the goals and initiatives of the company. This requires a careful balance of leadership and support. It is important that all organizational leaders understand that operational goals direct IT and not the reverse. Lack of clarity regarding the relationship between operations and IT can put projects at risk. All projects need operational leadership and, as necessary, IT guidance and support.

Information management and systems leaders need to be keenly aware of organizational goals and be ready to actively recommend appropriate systems and technologies in support of those goals. Organizations that stay focused on goals will not catch the IT leader off guard. When goal deviation is suspected, the IT leader needs to be ready to challenge the request and to get the project back on track. Remaining focused on goals will help the IT leader and the organization to avoid creating the service gap that occurs when requested services surpass what the internal staff can provide.

New project requests are likely to come from a variety of sources. Some of the requests will be more fully developed than others. Requestors will need support in determining their project's scope, definition and objective. Requestors will also need potential relationship support with a vendor that can undertake the request. The IT leader needs to have program evaluation staff that can sit with requestors and help them work through a new project request. Lacking resources and structure, customers may suggest a solution to a problem that has not been well defined. They need to understand new technology, device integration options and infrastructure limitations. They also need to understand how to leverage the existing application portfolio and how to utilize network services. IT can assist with evaluation of new vendors and provide internal and external consulting services.

All leaders need to know how to assess the tactical steps that are in place to support the organizational goals. Focused goals will bring clarity to the strategies that need to be achieved. Be wary if an organization does not have the discipline to understand what is within its ability to accomplish in a defined time period. Leaders have a responsibility to serve as the organization's conscience regarding IT requests and service overextension. Activities must be clearly prioritized so that all leaders are operating from an institutional strategic plan.

Goals, strategies and tactics will inevitably require both redirection and an occasional time-limited expansion of scope. An IT leader must know which

personnel resources are available and understand their readiness to manage contingency planning when unexpected resource issues occur. This knowledge will help the organization remain flexible and make more efficient and well-thought-out decisions in matters requiring IT support.

Not only must IT leaders understand and support the organizational goals with their system-level knowledge and expertise, but they must also have a methodology that supports the organization's ability to measure activities against their stated goals and objectives. They must facilitate a process in which all leaders work together to define the organization's measures of progress and, ultimately, success. If agreement cannot be reached on a measure, it will be difficult to know when the related goal has been achieved.

The measures can be used for internal benchmarking, in which the organization defines its current place, defines the objective and then measures activity against both the starting point and the end goal at regular reporting intervals. Local and national benchmarks may be available, but a contract may be required to use them. It can often be costly gain access to private benchmark data.

Benchmarking data are available in many, but not all, aspects of IT management. Be sure that any benchmarks used are comparable to the data your organization is capable of supplying. Careful clarification on the front end may decrease the challenges of apples-to-oranges comparisons, but a few disparate data points may well remain.

Developing the IT Strategic Plan

Among the many responsibilities of IT leaders is developing the IT strategic plan. In a very large organization, the IT strategic plan may serve as a reference tool for prioritizing the work that is to be done throughout the organization. In small or less complex organizations, the IT plan may be more appropriate as a section or addendum to the organizational strategic plan. When developing an IT strategic plan, it is important to include the input of operational leaders and the staff responsible for the actionable components.

Begin the process of developing an IT strategic plan with copies of both the current IT plan and the organizational strategic plan. If the organizational plan has not been developed or refreshed in the last 12 months, then you must start the process by validating the strategies and tactics of the organizational plan first. The IT strategic plan must be perfectly aligned with all the organizational priorities. If there is no previous IT plan to work from, a myriad of free templates and resources can be found on the Internet¹ and used as models for formatting and organization.

Consider taking the following steps to develop your IT plan:

- Initiate the document by including the mission, vision, goals and strategies of the organization. IT supports the business and therefore must be grounded in that business and its strategies

- Identify the current state of the systems and processes that support the business and assess their effectiveness in meeting their stated functions
- Define the gap that exists between the functions that are or can be provided and those that need to be developed or procured
- Compare the timeline for staff to manage the development and costs associated with external development or purchase
- Identify who will take responsibility for the initiatives to be addressed

The initial stages of the plan need to reinforce the idea that there is no such thing as an IT project. All projects are organizational and strategic in nature, and IT is only one component within the bigger initiative. Once top managers understand and agree to that, they will recognize why every major initiative will need to be sponsored by operational leaders. A well-developed plan will map the organizational strategies and the supporting applications and processes for each strategy. Once fully developed, the map will provide a visual representation of the current systems' status, an indicator of the expected useful lifeline of the systems or the gap that exists between the strategy and the needed technology.

The remainder of the plan can focus on the gaps—the gap analysis. The plan can outline the current state and desired future state. An approach to consider would be to evaluate the strengths, weaknesses, opportunities and threats (SWOT) of the current organization. In cases where it is not likely that the gap can be bridged with a single process or system change, the plan needs to outline the steps that can be laid out to achieve the desired outcome. As many of the steps may each take several years to complete, the plan's details need only focus on the first step or two, and then more high level for the remaining steps. This is practical, as the technologies and organizational priorities may change during the interval.

Finally, the plan needs to outline some of the pure IT initiatives and personnel needs. Examples of this might include advanced technologies like virtual ICUs, system transitions to cloud technologies, radio-frequency identification (RFID), artificial intelligence and advanced device integration. The plan would include regular system upgrades or replacement strategies. Planning to accommodate current and future resourcing needs, as well as the transition and succession plans for staff and leaders is crucial to ensure consistent leadership. All organizations experience turnover. Is there someone who has the appropriate education and skill set to step into an interim role? Does that person have the qualities to take on the role permanently? How about key managers and supervisors? Each leader should have a mentee within the organization who is being groomed and educated to move up when the time is appropriate. A well-prepared organization has the bench strength to maintain leadership stability in the same way it has system redundancy to maintain continuity.

Implementing the IT Strategic Plan

Once developed, the IT strategic plan needs to remain a living object and therefore must be regularly maintained. To achieve this, the document needs to be part of the organizational strategic plan and updated accordingly with any changes to its companion. The key IT objectives must be visible to the entire department, so that they have an opportunity to see and commit to each objective regularly. Annual performance objectives can be tied back to this plan, and regular reports can be produced and used as measures against the IT strategic plan. Finally, treat the plan itself as a project. Maintain a color-coded scorecard of goal progress and achievement for all to see.

Reporting on System Performance, Evaluating Performance and Evaluating Customer Satisfaction

Measures that monitor the effectiveness and progress of departmental activities are necessary for leaders to evaluate overall performance of a work unit. In an operational sector that has both projects and services, two types of measures will be necessary.

Project Tracking

Tracking a project is most effective when using a project plan and a related Gantt chart. A project plan lists tasks with estimated timeframes, dependencies and responsible resources. A Gantt chart, associated with a project plan, includes a series of rows detailing each of the steps and sub steps to be completed within the project. Each row has multiple columns identifying start dates, projected end dates and completion percentage. The project plan and the Gantt chart provide an excellent way of visualizing an entire project in both highly summarized and detailed ways. Commercial project-tracking software products are available, but many organizations effectively manage projects using a simple spreadsheet. An example of measuring a project against goals is included later in this chapter.

In departments where service is a component of the work done, it will be important to have a service-level agreement (SLA) with indicators that are tracked at regular intervals. The expected service level can be internally derived, negotiated with the customers, or driven by externally agreed-upon benchmarks. Service-level parameters can best be measured using a dashboard visualization tool. A dashboard is a series of graphs or tables that indicate the current performance, the historic performance for an appropriate time interval, the expected quality of services, and if appropriate, the acceptable level of variation below and above the stated goal. In addition to the quality-of-service goal, there may be a stretch goal, though it is

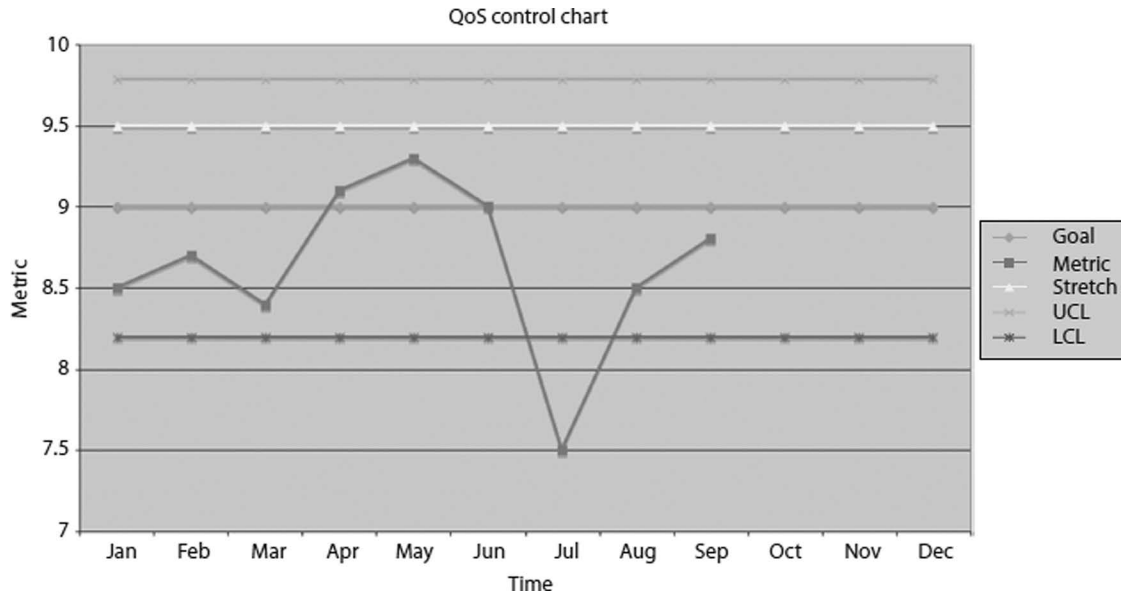


Figure 9.2 Quality-of-service (QoS) control chart. UCL, upper control limit; LCL, lower control limit.

not usually on a control chart. The stretch goal is typically an internally desired target that exceeds any quality-of-service parameters that have been agreed to.

A typical dashboard includes a series of control charts. Control charts are statistical representations of the graphs discussed above. They add lines representing the upper control limit (UCL) and lower control limit (LCL). This considers that there will be natural variation in the results represented around a mean. To the extent that a series of points begins to move in one direction or the other, it will become necessary to review the process looking for special-cause variation. In any business, variation will often increase costs. In healthcare, variation may also signal changes in the quality of patient care and therefore warrants immediate attention and understanding. A sample quality-of-service control chart is presented in [Figure 9.2](#).

Assessment

At times, organizational leaders may find that they have become too detached from the organization and the stakeholders they are serving. IT leaders may be especially prone to this because they often work in a separate location from where care services are provided or because the complexity of their work slowly removes them from the day-to-day environment of care. Regular departmental and system assessments will prevent isolation and enhance communication with stakeholder communities throughout the organization. The assessments need to include the effectiveness of both the systems supported and the services provided.

Measuring system effectiveness needs to start with a baseline analysis. This ties in very nicely with the earlier discussion of understanding service-level benchmarks. It is important to have both an objective and a subjective assessment of the quality metrics. A simple example of this can be seen in an assessment of system availability. Ninety-nine percent uptime for a computer system sounds highly efficient and tracks very nicely along a control chart. Customers, however, report that they struggle with the average of 1.75 hours of system downtime each week. Even though that falls within the 1% deemed acceptable, a customer assessment helps the leader understand the customer's point of view. Furthermore, the environment factors into this assessment. For example, the 24/7 healthcare environment has expectations of 99.999% system availability.

A baseline assessment can be accomplished in several ways. Face-to-face interviews have value for systems that affect only a small number of stakeholders, especially when they work in disparate parts of the company. Unit rounding will be effective when actual observation of the system in use is needed. What better way to demonstrate an interest in stakeholders' work than to be present in their environment? Typically, it is most efficient to meet with a group of users together. This can be done by going to departmental or unit meetings that are already scheduled. Alternatively, you may choose to call a town hall meeting to look at a general situation or a focus group to examine specific situations. Both can be organized as either physical or virtual meetings.

The baseline assessment is designed to gather data regarding the systems that the stakeholders are using and the way they are being used. Take the time to understand the stakeholders' expectations of system availability and performance. Listen to their past internal and external experiences and pay special attention if they note adverse changes in systems performance. Use the assessment time to accept feedback regarding opportunities for system operating improvements. Be clear that not all requests can be accommodated but remain open-minded to what will result if some meaningful feedback is directly addressed.

Once the baseline is determined, commit to a regular process of follow-up analyses. Identify the interval that is most appropriate. If the organization concurs with an initial assessment that the performance of IT systems and services is satisfactory, then an annual follow-up assessment will be enough. A lower than desirable assessment warrants a prompt turnaround and more frequent follow-up. Regular communication or monthly status reports should address commitments to improvement. Effectiveness should be reassessed at regular intervals agreed upon with customers.

The process for the follow-up assessment can be accomplished by telephone or web-based surveys. Providing easily accessible feedback tools within the applications themselves will prompt regular responses. Customers will appreciate the availability of immediately accessible feedback because it will enable them to avoid making calls to the help desk.

Departmental Effectiveness

Departmental effectiveness needs to be differentiated from system effectiveness as you do your assessment. The distinction is necessary because customers and stakeholders have a multitude of different needs. The methodology for retrieving feedback about the two can be essentially the same, but the objectives will be different. In the departmental assessment, the value is in understanding how the personnel respond and relate to others within the organization.

Departmental effectiveness is measured using interpersonal metrics reported by customers. Leaders have an advantage because they have also had the opportunity to receive customer service. A typical first impression of customer service is formed by the response time to inquiries. Keep in mind that customers are providing clinical services and therefore are not typically in one physical location for more than a few moments at a time. Any response time greater than just a couple of minutes is likely to cause dissatisfaction. A popular service management framework to consider is the Information Technology Infrastructure Library (ITIL).²

Additional factors to be considered when evaluating customer satisfaction include:

- Does IT staff empathize with the concerns and frustrations of customers?
- Does IT staff communicate regularly with customers when they are working on a problem that takes more than a short time to resolve?
- Does IT staff communicate resolution of system issues back to customers who originally reported the problem?

Managing Customer Relationships with Business Leaders

Customer relationship management (CRM), a widely accepted practice in healthcare, is an organization's approach to interactions with customers, patients, vendors and other business associates.³ CRM involves using proven methods to attract new customers, retain current customers and reestablish relationships with past customers. It also involves leveraging technology, such as the Internet and social media, and traditional marketing techniques to organize, automate and synchronize business processes. Using CRM, healthcare organizations can achieve increased quality and efficiency, reduced overall costs and greater profitability.

Unlike many industries that are product driven, healthcare organizations are uniquely service driven, ultimately aimed at developing relationships to improve patient loyalty by getting the right information at the right time to everyone involved in the continuum of care. By customizing service offerings to better meet customer expectations, and by continuously training and rewarding employees for delivering exceptional customer service, healthcare organizations

can achieve profitable customer relations not only with patients, but also with payers, regulators, vendors and other stakeholders.

To improve customer satisfaction levels, a comprehensive systems approach is recommended.⁵ It is critical to set a clear customer experience strategy. Customer service involves more than creating an organizational slogan. To establish a good strategy, it is important to understand the organization's vision and mission; determine the organization's customer service direction, slogan and values; share the customer service strategy by using a comprehensive communications program; emphasize customer service is a key responsibility for each department; and ensure the customer service strategy aligns with the other organizational strategies.

Selecting the right team and developing, motivating and managing staff members are some important areas of consideration. Interpersonal skills and the right attitude are two qualities critical for employees to possess when providing customer service. Emphasizing functional expertise, technical competence and knowledge is less important, and many of these can be taught. Employees working directly with the customer need to understand the organization's culture and learn key communication skills. Four steps needed to build a culture of excellent customer relations are as follows:

1. Provide training in key skills needed to deliver excellent personal service
2. Use ongoing coaching and feedback to reinforce improved customer relations
3. Regularly measure and monitor performance levels
4. Reward performance with both monetary and nonmonetary awards

Effective service delivery creates efficient customer interaction, eliminating the need for third-party intervention to keep customers satisfied. To help ensure a positive customer experience, it is important to identify preferred service delivery processes, review critical success points in those processes and determine service standards and objectives. In addition, it is vital to establish service delivery procedures to maximize material service and create SLAs to improve customer satisfaction.

Regardless of how well trained the staff is or how effective the organization's current service delivery processes are, opportunities for improvement can always be identified. It is important that problems and issues be resolved quickly by building continuous improvement into the service delivery procedures. To properly manage the customer experience, it is necessary to identify where opportunities for improvement are by actively soliciting customer feedback; teaching staff how to handle customer complaints effectively by using the correct blend of empathy, apology and resolution; focusing on the root of the problem and not just the symptoms; and being proactive in seeking to prevent issues instead of reacting to events that have already occurred.

Although senior management support is vital for creating and maintaining a successful CRM program, involving midlevel management in the change process and empowering them to be key change agents is essential. To do this, it is vital to engage the management team early and often, to involve management members in formulating the customer service strategy and to develop managers' coaching skills so that they are able to understand and reinforce key personal service skills. In addition, management should include managers as facilitators during training sessions; reward managers for establishing, monitoring and updating service delivery processes; and motivate managers to be examples to their teams.

Providing Customer Service

Healthcare is primarily a people business—it calls for the organization to be particularly customer focused, or customer centric. HIMSS defines customer centric as “placing the customer as the center or focus of design or service.”⁶ It is excellence in service that distinguishes the IT department as responsive and knowledgeable, or as customer centric. There are several specific factors and approaches to consider in organizing the customer service functions in the IT department. Leaders in healthcare IT are expected to have ethical working relationships with both internal and external customers. In the healthcare sector, internal customers can be physicians, nurses, human resources representatives and others with a vested interest in the success of the organization. External customers include patients, consultants, vendors and others connected to the institution via services, a contract or an agreement. The frame of reference is important when considering how to categorize a customer. In the example above, the entire hospital would be considered the frame of reference. In a situation where a single department is considered, internal customers might be the a much smaller group, and external customers might be others within the organization.⁷

Delivering outstanding service requires the building of a culture that focuses on customer relations. This can involve changing all aspects of an organization's service delivery. The investment of time and effort can be significant, but the rewards can be enormous, building long-term patient and customer loyalty and helping to ensure business profitability.

Promoting Stakeholder Understanding of IT Opportunities and Constraints

Health information and management systems' leaders have a responsibility to discuss the opportunities and systematic limitations of using information systems to address organizational goals and objectives. Leaders must educate

stakeholders by highlighting opportunities to be gained using technology as well as explaining any limitations.

The initiation of a project charter is a critical juncture in IT's support of the organization. Success can be achieved using a well-articulated and accepted process that facilitates understanding and communication between the leader and the stakeholders. A method for initiating a project is via the utilization of an SBARC. SBARC is an acronym for situation, background, assessment, recommendation and communication. This is an extension of the SBAR (minus the communication step) developed at Kaiser Permanente by Michael Leonard.⁸ The one- to two-page SBARC proposal helps to frame a situation or request and a method of addressing it. It is an easy way to document a situation and proposed approach to a very wide audience. The simplicity of the tool makes it easy for a knowledgeable team member to complete and provides a concise summary for leaders to assess prior to committing to a full project proposal or a *pro forma* financial plan.

The SBARC process begins a discussion of the key goals and objectives of an initiative and frames some of the potential strategies for resolution. As appropriate, the SBARC may be followed up with a more formal business planning process and *pro forma* financial plan. A disciplined approach to framing and initiating projects ensures that the stakeholder and the project team members are operating from an identical framework. Ways of assessing the process improvement needs might include the utilization of either a Lean (production practice looking at resource consumption) or Kaizen (continuous improvement processes) methodology as a tool for optimizing the performance of a system. Once developed, the framework includes the deliverables of the project, along with the cost and timing, together defined as the scope of the project.

A well-written plan that has been signed off on by all stakeholders will help to eliminate the opportunity for scope creep to infiltrate the project. Scope creep is a common event in the life of a project. New opportunities or events will warrant that new analyses occur. A disciplined analysis following the project planning approach outlined above will weigh the merits of new opportunities in the context of the project. This is referred to as scope or project change control management. If a value-added suggestion is made and approved, then the plan is amended and communication undertaken. Scope creep is the undisciplined addition of new goals, objectives and milestones that may have a negative effect on the cost or timeline of a project. This occurs when inadequate analysis of suggestions occur, and additional work is added to the project. An effective way of avoiding scope creep is to anticipate it and have a method of reviewing recommended changes in scope with the project's leadership team on a regular basis.

At times, a more appropriate method of project planning is the agile methodology. Using this approach, initial objectives are expressed and a series of sprints are defined. At the end of each sprint, the team members review the

product and suggest enhancements to be included in the next sprint interval. This method allows for more flexible development cycles.

Developing Policies and Procedures for Information and Systems Management

The implementation of policies and procedures within an organization facilitates the standardization of actions and operations for employees, patients and guests. Often, policies and procedures can be implemented in any portion of the organizational structure, from the entire company to the very smallest operation. Leaders face two questions: Is the policy really needed? If so, at what level of the organization must that policy be implemented? To maintain their accreditation in the United States, a healthcare organization is required to have a defined set of policies on information management and security and privacy policies. IT leaders in other countries will need to understand the accreditation standards that apply to their operations.

Prior to policy implementation, consider for what purpose you are developing a policy, and whether it is necessary to have a policy and procedure to govern that activity or process. If so, do not begin from scratch. Peers, both locally and nationally, have addressed many of the issues you face, and those same peers will have advice and examples to share. Start with a local survey of your peers. This has the advantage of helping you establish local networking connections and begin to create a community standard for the policy in discussion.

If local support is not available, then move to national peer groups, but ask yourself why you may be in front of the curve for your community. You can always look to organizations like HIMSS,⁹ International Federation of Health Information Management Associations (IFHIMA),¹⁰ and International Medical Informatics Association (IMIA)¹¹ or other national professional associations allied to the field. These organizations will all have examples of a variety of policies.

A reason for *not* adopting a policy or procedure is your inability to audit and report on the effectiveness of the policy in question. If you do not have the ability to audit, then you run the risk of a challenge by health system accreditors. Do what is measurable, measure what you do, review what you have measured and act on the results of what you have reviewed.

Be prepared to act on the results of your audit measurements, and make sure that the implications of failing to adhere to a policy are built into the policy itself. The consequences of noncompliance, when embedded within the policies and procedures, will help close the loop for employees. If there needs to be room for exceptions, those exceptions must be outlined as part of the policy as well. Once again, if there are no consequences for deviation from policy, then you must ask yourself whether there is a need for the policy in the first place.

On some occasions, policies and procedures are used as much for education and training as for any other purpose. A good example of this is a password policy. It is inevitable that a challenge will be brought forward regarding the implementation of a password policy. As most, if not all, systems allow the definition of the policy to be incorporated directly into the software, it really is unnecessary to have a separate policy because the system will not allow staff to create a password that does not meet the standard. In this case, a policy explaining the risks of weak password construction, in addition to meaningful education on how to create a strong password that is easy to remember, might be a better overall strategy.

Complying with Legal and Regulatory Standards

The discipline of information and management systems includes a complex web of legal, regulatory, accreditation and other compliance issues. Each country is going to have its own sources of oversight. IT leaders have a responsibility for knowing the sources of those standards in their own country. In the United States, navigation of meaningful use, e-prescribing, conditions of participation and Health Information Portability and Accountability Act (HIPAA) is just the beginning of this complex responsibility. Effective leaders need to either understand the many nuances of these standards or have easy access to individuals who can assist in their understanding. Those individuals include the corporate compliance officer or equivalent, legal counsel and the lead Joint Commission liaison, among others.

Depending on the size of the organization, all the responsibilities may fall on the shoulders of one individual. Most likely though, the responsibilities will be distributed around the organization, with those individuals coming together under the auspices of a corporate compliance committee, a Joint Commission International (JCI)¹² steering committee, or perhaps an audit and education committee. The information that these individuals are responsible for is ever changing. Their knowledge comes from several key documents, most of which are available directly or by purchase over the Internet. In the United States, the information can be obtained from the Centers for Medicare & Medicaid Services (CMS),¹³ and internationally, from JCI.¹²

The two most influential sources of standards for healthcare organizations in the United States are CMS and the Joint Commission, formerly known as the Joint Commission on Accreditation of Healthcare Organizations.

CMS can be found at <https://www.cms.gov/>. CMS is a part of the Department of Health and Human Services (HHS). The key operating document for a hospital that receives any funding from CMS is “Conditions for Coverage and Conditions of Participations.” The details of this framework are found at <https://www.cms.gov/Regulations-and-Guidance/Legislation/CFCsAndCoPs/>. A healthcare organization is held to these conditions in order to receive funds for services. On

a day-to-day basis, the *Federal Register* serves as the “the official daily publication for rules, proposed rules and notices of Federal agencies and organizations, as well as executive orders and other presidential documents,” and the first and last indications of proposed rule changes.¹⁴

JCI is located online at <http://www.jointcommissioninternational.org/>. It serves as the voluntary accreditation body for more than 100 countries throughout the world. Accreditation is accomplished by complying with a comprehensive list of standards published by JCI. Organizations meet the standards through preparation, followed by a scheduled site review by a team of JCI surveyors.

Adhering to Ethical Business Principles

Corporate financial implosions and evidence of legal and ethical impropriety bring the need for organizational and leadership ethics to the forefront. As an organizational leader, it is important to the practice of your profession and your position as a role model to your staff that you adhere to an identifiable code of business or corporate ethics.

In the context of your role, you must understand and adhere to the corporate code of ethics and values as established by the administration or board of directors of the organization where you work. On one end of the spectrum, business ethics are meant to ensure that all members of the organization are complying with local, state and federal laws in the work that they do, and that they as individuals feel both compelled and safe to report any activities that are not within the scope of the law. Both large and small organizations will have a person or department charged with corporate compliance.

Corporate compliance programs are made up of a set of basic elements. Senior management must be aware of and involved in the process of compliance. Policies and procedures must reflect the organization's procedures for achieving compliance. Education about compliance must be given to both management and employees. And, there must be both monitoring programs and disciplinary procedures to act on those who do not adhere to the compliance approaches. Actions need to be in the best interest of the company and absent of any financial gain for individuals or for any member of their immediate family.

At the other end of the spectrum, business ethics extend the concepts of fairness and equity both inside and outside the organization. The organization is a member of the business and local communities, and there is an implied duty to be a contributor to those communities.

Employing Comparative Analysis Strategies

Organizational leaders need to understand more than their own departmental goals, measures and metrics. IT leaders are often part of the operational leadership of the entire organization. They need to understand the organization's

overall financial and budgetary reports, its comparative benchmarks and its overall performance.

Budgets

To understand how the organization is doing financially, it is necessary to be able to read and understand a budget spreadsheet. Typically, such reports will be summarized and reviewed by the financial leaders of the company. These reports include the annual budgets by line item and the projected budget and expenditures to date. Variances between budgeted and actual expenditures to date will be reported, and there may also be a column that enables comparison with actual expenses for the most recent historic comparable financial period. This often consists of last year's expenses for the same time period. Many expenses are spread evenly over the year and are easy to predict, measure and compare. Other expenditures have unique timing considerations that, if not understood, can lead to a false understanding of the reports. Revenue and expenses that are recognized on a semiannual or quarterly basis can make year-to-date results appear far from expected, especially if the budget is constructed with an even distribution of those same expenses and revenues. A well-constructed budget report will include notations explaining the timing of events.

Other Financial and Nonfinancial Indicators

Financial and nonfinancial indicators are measured to compare one organization with another, or against national benchmarks. Days in accounts receivable, or A/R days, is an expression of the average amount of time it takes for the organization to receive payment from payers after the bills have been submitted to the guarantor. The discharged not final billed (DNFB) is an indicator of the expected amount of money to be billed to the guarantor, but not yet submitted due to outstanding documentation or procedural issues. Both indicators are important, as they represent money due to the organization but not yet received. Cash available to the organization is referred to as the day's cash on hand and represents the number of days the organization could continue to operate if no further new funds were received by the organization. The larger the number, to a point, the better it is for the organization.

Benchmarks

In addition to the previously discussed benchmarks specifically for information and management systems, there are benchmarks for organizational operations. These too are made up of both internal and external comparisons. The internal benchmarks are usually set by operations or the board of directors and are often reflections of the financial indicators listed above. Typically, the organization

will set its goals for the number of days in A/R and days cash on hand. External benchmarks may include additional financial indicators, but are likely to reflect quality, safety, regulatory, or accreditation measures.

Quality Indicators

Quality indicators may be set by state or federal government agencies or payers to the organization. They may serve as goals to be met and aggregate data to establish benchmarks. Each country may have its own voluntary or required quality benchmarking processes. In the United States, the Department of Health and Human Services (HHS), which is a part of CMS, has several quality reporting programs depending on the type of setting. Other indicators are available from external services, such as the University Health System Consortium or Premier®. These entities will take extracts of your organization's data and aggregate them with comparable data from other organizations. This information is then distributed back to the data contributors so that each organization can compare its own results with different slices of the healthcare continuum. The advantage of these external comparison groups is that they enable an organization to compare itself with other organizations of like size, educational service, payer mix, geographic location and so forth. The downside is that some of these programs are subscription services that provide comparisons only to paid subscribers.

Quality Standards and Practices

Oversight for an IT department, especially one that has responsibilities for software development, requires careful attention to quality control standards. The National Academy of Medicine (formerly known as the Institute of Medicine (IOM)) has produced many publications citing issues with patient quality and safety, including *Health IT and Patient Safety: Building Safer Systems for Better Care*.¹⁵ While a U.S. publication, the principles and recommendations set forth have international relevance.

Software as delivered, and its subsequent configuration by IT staff, requires comprehensive and regular review to ensure safe and high-quality performance. Quality assurance begins with the staff that implement and configure the software technically. Performance can be measured against testing results provided by the software vendors themselves and internally developed quality assurance scripts. As an example, external quality and patient safety organizations such as the Leapfrog Group¹⁶ can provide testing to ensure appropriate decision support and alerts for computerized practitioner order entry (CPOE) programs.

Leaders must set clear expectations, or a plan, for the quality standards to be delivered and then measure, report and modify the plan to continually improve

on the products delivered. Publishing current performance, as well as goals and objectives, will remind the entire department of the expectations and aspirations for which the group is striving.

Managing Projects, Project Portfolios and Vendors

Another major role of the IT professional is project management. Project management methodology is used in healthcare organizations to successfully implement new and complex IT systems. Project management is the discipline of planning, organizing, securing, managing, leading and controlling resources to achieve specific goals. A project is a temporary endeavor with a defined beginning and end. The temporary nature of projects stands in contrast with organizational operational initiatives, which consist of repetitive, permanent, or semi-permanent functional activities. Hospitals that support both project and functional initiatives are called matrixed organizations. In cases where multiple interdependent projects exist, program management is used to manage all the projects in a portfolio.

Health systems with multiple independent projects and resources that require a formalized framework for tracking, allocating and managing them effectively often adopt project portfolio management (PPM). PPM is the centralized management of processes, methods and technologies used by project managers (PMs) and PMOs to analyze and collectively manage a group of current or proposed projects based on numerous key characteristics. As the PPM landscape has been evolving rapidly, healthcare organizations are looking to manage their project initiatives through a single, enterprise-wide system called enterprise project portfolio management (EPPM).

In contrast to the traditional approach of combining manual processes, desktop project tools and best-of-breed PPM applications for each project portfolio environment, EPPM takes a more integrated and top-down approach to managing all project-intensive work and resources across the enterprise.

Project management has the following phases:

- **Initiating phase.** In this phase, project stakeholders are identified, the project charter and the preliminary scope statement are developed and the project charter is approved.
- **Planning phase.** This phase involves planning the project scope, quality and risk management and schedule. The project scope is defined through creating the project management plan, developing the scope management plan and creating the work breakdown structure (WBS). Quality and risk management planning involves identifying and analyzing risks and planning the risk responses. The project schedule is developed by defining and sequencing activities, estimating activity resources and duration, determining the project schedule and planning human resources.

- Executing phase. This phase involves directing and managing project execution; acquiring, developing and managing the project team; performing quality assurance; and procuring project resources.
- Monitoring and controlling phase. This phase involves managing the integrated change control process; controlling quality; controlling changes in cost, schedule and scope; measuring performance; and monitoring and controlling risks. An effective change control methodology will address both reactive and requested changes and will include processes for categorizing changes and determining how changes will be requested, reviewed and implemented.
- Closing phase. This phase involves releasing the final deliverables to the customer, handing over project documentation to the organization, terminating supplier contracts, releasing project resources and communicating project closure to all stakeholders. The final step is to undertake a post-implementation review to identify the level of project success and note any lessons learned for future projects.

According to the Project Management Body of Knowledge (PMBOK®) Guide, project management consists of nine knowledge management areas¹⁷:

1. Project scope management involves ensuring all the required work is performed to complete the project successfully. Scope creep is a key reason why many projects fail. Project scope management is accomplished by defining and controlling what is included in the project and what is not. Project scope management activities include the scope plan, scope definition, WBS, scope control and scope verification.
2. Project time management involves developing and controlling the project schedule. Project time management components include activity definition, activity sequencing, activity resource scheduling, activity duration, schedule development and schedule control.
3. Project cost management involves estimating the project cost and ensuring the project is completed within the approved budget. Accordingly, cost management includes the cost estimate, cost budgeting and cost control.
4. Project human resource management consists of obtaining, developing and managing the team who will perform the project work.
5. Project procurement management encompasses managing the acquisition of products and services from external sources in order to complete the project. Project procurement management includes planning acquisitions, negotiating contracts with sellers, selecting sellers, administering contracts with sellers and closing contracts.
6. Project risk management focuses on the identification of project risks and appropriate responses. Project risk management includes identifying risks, performing a risk analysis, developing a risk response plan and monitoring and controlling risks.

7. Project quality management involves ensuring the project satisfies its objectives and requirements. Project quality management includes performing quality planning, quality assurance and quality control.
8. Project integration management consists of the integration of the various project activities. Project integration management includes developing the project management plan, directing and managing project execution, monitoring and controlling the project work and closing the project.
9. Project communications management ensures project information is generated and distributed promptly. Project communication management activities include planning communication, distributing needed information to project stakeholders in a timely fashion, reporting the project performance and project status and resolving issues among the stakeholders.

The PM is an important stakeholder in bringing projects to successful completion. The PM is responsible for working with project sponsors, the project team and others involved in the project to meet project goals and deliver the project within budget and on schedule. The PM should also control the assigned project resources to best meet project objectives; manage project scope, schedule and cost; report on project progress; and facilitate and resolve issues, conflicts, risks and other obstacles to project success.

Managing Vendor Relationships

Healthcare chief information officers (CIOs) are increasingly turning to vendors for the expertise and support they need to meet the technology requirements of their organizations. This reliance on vendor partnerships enables vendors to play a key role in the success of many healthcare organizations. A well-managed vendor relationship will result in increased customer satisfaction, reduced costs, better quality and better service from the vendor. If problems arise, a well-managed vendor will be quick to remedy the situation. Vendor management is not simply negotiating the lowest price possible. It involves working with vendors on contract performance, schedules and costs, product functionality and support and maintenance agreements in order to mutually benefit both organizations.

The vendor management process begins with selecting the right vendor for the right reasons. This involves analyzing business requirements, performing a vendor search, selecting the winning candidate and successfully negotiating the contract. The contract should be carefully considered to ascertain that restrictions or exclusions, penalties and terms are beneficial to both parties. Once the relationship with the vendor has begun, vendor performance must always be monitored, with attention to the requirements that are most critical to the healthcare organization. Regular communication between the vendor and the healthcare organization will help to avoid misunderstandings and address issues before they become problems.

Three common pitfalls should be avoided in order to achieve successful vendor management.¹⁸ First, it is important not to confuse vendor selection with vendor management. Equal importance needs to be given to managing the vendor relationship during and after the selection and contracting phases. Second, do not select a vendor based on price alone. Instead, give priority to a vendor that understands the value of developing a relationship that is mutually beneficial. Third, do not forget to evaluate how your vendor relationships affect your business. In addition to examining SLAs and contract fulfillment, IT leadership determines whether an engagement has brought value to the organization and whether both parties have received a return on their relationship.

The following 10 vendor management principles will enable healthcare organizations to build effective relationships with their suppliers and service providers¹⁹:

1. Use project management methodology. Due to the high visibility and accountability of today's complex healthcare projects, attention should be given to the basics of project management, such as creating a well-defined and properly planned project, recruiting effective project sponsorship, clarifying roles and responsibilities, establishing formal change control management and ensuring effective issue management.
2. Understand vendor management is multifaceted. Effective vendor management involves evaluation and selection, contract development, relationship management and delivery management.
3. Be aware of the contract details. This includes understanding what the vendor is responsible for, managing the project and vendor according to the contract and understanding what incentives motivate the vendor.
4. Formal documentation is key. All changes to the project and communications must be in writing and formally controlled.
5. Contract complexity should be consistent with project risk. The procurement process and the contract's level of detail should correspond to the level of project risk.
6. Include all important deliverables in the contract. Important deliverable specifications; the methodology used to create the deliverable; specific resources, roles and responsibilities; planned communications; deliverable acceptance criteria; and project success criteria should be included in the contract.
7. Management commitment is key. Senior management's commitment and flexibility are important to making the vendor-customer partnership work.
8. Focus on benefiting both the customer and the vendor. Both parties to the contract should give high priority to developing mutually beneficial resolutions should issues and tensions arise.
9. Clarify contractual terms and expectations. All terms and processes in the contract should be reviewed, explained and clarified to avoid conflicts and misunderstandings.

10. Ensure vendor and customer roles and responsibilities are clear. All parties' roles and responsibilities should be precisely defined in the contract. Particular attention should be paid to interactions between the procurement department and the project team, the contract administrator and the PM and the vendor's PM, sales team and accounting and legal departments.

Consulting Services

Consulting services are frequently purchased when personnel resources are in short supply or when a specific skill is lacking within the organization. Most frequently, an organization goes to the outside to facilitate a large initiative when internal resources cannot be spared. It is possible to retain professional services on an issue-by-issue basis or to keep a firm on retainer. Additionally, an organization could supply in-house consultation as a means of managing, staffing, or advising on any manner of need.

In-house consultation can be provided by individuals on an as-needed basis, but larger organizations are beginning to implement a PMO.²⁰ The IT and facility/plant management departments and staff often have the greatest depth of experience in managing large and complex projects at any organization, and the PMO may grow out of one or both of those areas. The PMO has personnel who are trained or certified in project management methodology as sponsored by the globally recognized Project Management Institute, Inc (PMI).²¹

Staff of the PMO are skilled at meeting with operational personnel to understand the detailed requirements of the project at hand and translate those requirements into a plan for execution. They understand the processes of resource gathering, project planning and project scope management, as well as the tools for visualizing the life of the project. They have the skills to manage development of the project's *pro forma* financial statements and the ongoing project budget. As the organization moves from IT projects to strategic operational projects with IT components, the IT project leaders can begin to alter their focus from operational leadership to true project management.

IT leaders may also serve as the voice of internal expertise. As departments throughout the healthcare organization begin to automate, they may need guidance or advice as to how to incorporate technologies into their workflow. The IT leaders or the PMO can provide innovation support to explore existing technologies to implement or watch for these departments. Partnership between the operational and technology experts creates an opportunity for innovation

Preparing and Delivering Business Communications

It is critical for leaders and managers to possess excellent written and verbal communication skills, and to have the ability to organize and manage business meetings. Organized meeting preparation helps the attendees to

understand the goals and objectives of the meeting and the importance of the time invested. Well-prepared documents outline the topics and time to be spent on each issue. An example of a comprehensive meeting agenda is presented in [Figure 9.3](#).

Organization name	Name of your committee				
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Meeting Information				
Meeting name:	November ITSC	Meeting date:	11/28/2007	
Time:	7:00 am to 9:00 am	Location:	Room 106	

Attendees			
Names:	☐ Chairperson ☐ Attendee 1	☐ Attendee 2 ☐	☐ Attendee 3 ☐
November guests: ☐ Guest 1 and reason for attendance ☐ Guest 2 and reason for attendance			

Agenda			
Discussion point	Expected outcome	Responsible party	Time (min)
Agenda review	Agree to meeting goals		5
Prior meeting review	Approve prior meeting minutes Review/update action items Review/update issues status		5
Item 1	Discussion v. decision		10
Item 2	Discussion v. decision		10
Item n	Discussion v. decision		30

Committee action items					
Action item	Comments/Progress made	Responsible party	Completion date		Status
			Original	Revised	
2008 IS budget	Send 2008 IS budget communication to ITSC committee members		10/31/07		
Data center approval request — November board	Send data center summary information to ITSC committee members		11/2/07		
Tactical plan for all IS initiatives	- Listing of all current and requested service requests for IS - Tool will become a part of decision-making process - Draft to be presented at October ITSC for approval		12/20/07 Awaiting System Capital Project Approval Process		

Committee action register — pending items					
Action item	Comments/progress made	Responsible party	Completion date		Status
			Original	Revised	

Figure 9.3 Meeting agenda template. (Continued)

Organization name	Name of your committee				
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Complete IS 5-year assessment/estimate of infrastructural requirements and associated cost	Expand 5-year incremental costing grid to include expense/capital impacts related to replacement equipment/upgrades, etc. (known costs of doing business)		TBD		
Develop ITSC dashboard	Define metrics — situational/operational	Team	TBD		

Open Issues (from previous meetings)			
Issue	Action taken or required	Assigned to	Status

New Issues raised		
Issue	Action taken or required	Assigned to

Tentative future meeting agendas			
Discussion point	Planned outcome	Responsible party	Time (min)
Simple sign-on/CCOW/biometric access technology	Establish strategy for technology access - Educate committee on capabilities pros/cons, complexity, and implementation impacts - Decide how to perform exploration — funding - Potential to neutral/external party with industry expertise define scope	Team	

Key decisions made

Meeting minutes		
Discussion point	Discussion Notes	Time (min)
Agenda review	Meeting began at 7:00 am.	
Prior meeting review		
Item 1		
Item 2		
Item n		
Adjourn	Meeting adjourned at 9:00 am.	

Figure 9.3 (Continued) Meeting agenda template.

A meeting agenda template for all meetings and minutes of the meeting will help meeting facilitators. Use of these tools creates a uniform method of communication that allows the staff to learn how to identify issues, actions and decisions in a consistent way. Variations in templates and formatting add a level of complexity for the meeting attendees and customers.

The agenda template in [Figure 9.3](#) starts with the organization's name and the committee's name. Each header defines the section to follow. "Meeting Information" states the date, time and location of the meeting, while the subsequent section, "Attendees," lays out the expected participants and the roles they will play. The agenda itself lists each of the discussion points, the expected outcomes, the parties responsible to lead the discussion and the time limit for the presentation, discussion and decision, if necessary.

The "Committee Action Items" and "Committee Action Register" sections list the pending actions from the most recent meeting and other prior meetings, respectively. These sections enable all parties to have a comprehensive understanding of the status of all action items that remain open. Lacking those sections, it would be easy for a busy committee to lose track of items that have lower levels of priority than others do. It is acceptable to push back the date of some deliverables, but those changes should be made in a transparent way with the support of the committee.

The remaining sections of the agenda keep a record of actions and issues that are yet to be resolved. "Open Issues" lists items that were not completed by the desired action during the previous scheduled meeting. Any item that has been tabled will be left in the "Open Issues" section. "New Issues" serves as a tracking section for the meeting record keeper and the chair. This location is used to add issues that will need attention or completion in the time between meetings.

Presentation skills help define a leader. Leaders must speak clearly and with authority. First, let the audience know the purpose and the desired outcome of your presentation. Is the purpose to inform or to have an action result from the materials presented? During the presentation, include all the information that attendees need to understand, but highlight the key points rather than every detail. In closing restate, both the purpose and the desired outcome and address any questions or concerns, as this prevents disruption and loss of continuity during the presentation.

Project plans and status reports are important tools for everyone from executive leadership to project managers and staff. [Figure 9.4](#) shows an example of a project status report for an organization's electronic health record (EHR) implementation. Like other communications, status documents need to provide an initial brief summary and follow with necessary supporting documentation. For project communications, the timeline and the completion status are the best first materials for review. In a project status report, a color-coded summary of tasks and status provides valuable visual clues. Use of arrows also provides quick indicators of the general direction of the elements compared to their immediately preceding status. Keep the reports simple by using red, yellow and green to identify tasks that are out of compliance, at risk or on track, respectively. Status reports need only be a single page with a table of color-coded tasks, a summary of the issues, the responsible parties for each task and the estimated date of resolution or completion.

● ● ● ↑ ↓ ● ●

Status History

Area	Topic	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05
Project assessment	Overall status	●	● ↑	●	●	●	●	●
Area	Topic	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05
Project management	Staffing	●	●	●	● ↑	●	●	●
	Detailed project plan	●	●	●	●	●	●	●
	Implementation progress	●	● ↑	●	●	●	●	●
	Communication	●	● ↑	●	●	●	●	●
	Change management	●	● ↑	●	●	●	●	●
Go live	On schedule	●	●	●	●	●	●	●
Area	Topic	Apr-05	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05
Cadence	Staffing and			●	● ↑	● ↑	●	●
	Workflows			●	● ↑	●	●	●
	Reporting needs			●	●	●	●	●
	System build				●	●	●	●
	Testing							
	End-user training							
	Postlive activities							
HIM	Staffing and			●	●	●	●	●
	Workflows			●	● ↑	●	●	●
	Reporting needs			●	●	●	●	●
	System build				●	●	●	● ↑
	Testing							
	End-user training							
	Postlive activities							

Figure 9.4 Status report for EHR implementation.

This report does not reflect the project budget. The budget status needs to be reported regularly using current period and year-to-date summaries. All variances, greater than a predetermined amount, need to be explained.

Facilitating Group Discussions and Committee Meetings

It is important for a leader to facilitate conversations and it is equally important for a leader to guide a group through difficult discussions. This differs somewhat from a typical business meeting. Knowing the issues, controversies and positions of meeting participants helps to manage the discussion. Construct meeting agendas with consideration for the time it will take to resolve issues and keep controversial decisions at the top of the agenda or as the sole item so there will be adequate time for discussion and resolution. If able, meet with key committee members in advance and begin a process of negotiation and education.

Complex decisions and controversial topics can make meeting management a challenge. Become familiar with *Robert's Rules of Order*²² and define the expected rules of participation with committee members at the formation of the committee or at the beginning of any particularly challenging meeting in which you might anticipate conflict or debate. Keep a record of all motions and seconds. Record

the essence of key discussions, including the names of participants when there is dissension. Ideally, decisions will be arrived at by consensus, but when necessary, keep a detailed record of the vote. As the discussion leader, do not let any committee members dominate the conversation, especially if they do not wait their turn in the queue. Ask speakers to clarify whether they are speaking in favor of or against the motion at hand. Do not hesitate to clarify whether a member is contributing new insights to the discussion or just echoing another's thoughts. In the interest of time, the focus needs to be on the specific discussion and who supports or does not support the topic.

The committee chairperson must not dominate the conversation. The chair carefully guides the conversation through the selection of speakers, asks probing and clarifying questions and contributes or highlights commentary as necessary. Use the straw poll as a tool. Identify those in favor of a motion and those who can live with the motion. If some attendees cannot live with the motion as stated, they should be asked to offer an alternative solution that serves the goals of all parties at the table. This keeps attendees accountable for problem solving.

Steering Committee Meetings

In today's complex healthcare environment, steering committees are essential in providing guidance and practical direction for IT project and operational initiatives. According to the Computer Economics IT Steering Committee Adoption and Best Practices 2017 study, nearly 72% of all IT organizations have steering committees.²³ The use of IT steering committees ranks first as the most mature IT management practice out of 15 practices covered in the study.

A steering committee is defined as an advisory committee, usually made up of high-level stakeholders or experts, which provides guidance on key issues such as company policy and objectives, budgetary control, marketing strategy, resource allocation and decisions involving large expenditures.²⁴ IT steering committees are a best-practice approach in healthcare organizations for aligning strategic business and IT priorities. Steering committees, which usually include executives and department heads, focus on three main tasks: IT strategic planning, project prioritization and project approval. Clear mandates and a real ability to influence decision making through executive participation increase the value of IT steering committees.

To ensure success in this important area of IT governance, healthcare CIOs should consider adopting four strategies:

1. Create a committee charter that includes the desired outcomes. This should help everyone understand the role and purpose of the group, which includes promoting improved communication and recognizing the partnership required for a successful IT deployment.

2. Establish a scope that reflects a corporate-wide perspective. The broader focus will be helpful when mediating conflicts in priorities or departmental perspectives that may not be in the best interest of the entire organization.
3. Consider indicating the specific level of authority of this group and its role in decision making. For example, the committee may be identified as a coordinating body that will resolve priorities, endorse proposals prior to approvals and monitor progress of major IT initiatives, but will have no role in budget approval or other departmental expenditure decisions.
4. Designate someone other than the CIO to chair the IT steering committee. Assigning a non-IT person, such as the chief operating officer (COO), chief medical information officer (CMIO), or chief finance officer (CFO), to chair the group communicates the message that IT is accepted as a critical resource and recognized as such by the entire organization.

To form an effective IT steering committee and keep it on track, three important steps should be considered²⁵:

1. It is important to develop a case by aligning IT priorities with strategic business priorities. Focus on core IT strategic objectives and not IT resource allocation. In addition, stress shared decision making and foster a culture of communication between business units.
2. Develop a steering committee charter. It should outline the key tasks and responsibilities of the committee.
3. Keep the IT steering committee small and schedule regular meetings. Ensuring the membership is consistently informed, engaged as often as needed based on the project scope and timelines and includes executive decision-making authority, is critical to the success of the IT steering committee.

The use of IT steering committees is a proven method of driving better IT and business alignment. It is most effective in the area of IT governance, strategic planning, project prioritization and project approval. By developing an IT steering committee that has clear objectives, strong executive participation and a commitment to meeting regularly, IT leaders can significantly improve the value of IT to the organization.

Managing Risk

A key piece of the IT planning process integrates with the organizational efforts to manage risk. Issues of risk can be addressed along two dimensions. The first is magnitude of risk: If the event does occur, how big of an impact will it have on the organization, process or project? The second dimension is the likelihood of the risk: What is the best estimate of the likelihood that the risk event will in

		Magnitude of risk		
		Low 1	Medium 2	High 3
Likelihood of risk occurring	Low 1	1	2	3
	Medium 2	2	4	6
	High 3	3	6	9

Figure 9.5 Risk matrix.

fact occur? Within each dimension, the risk is low, medium or high and assigned a point value of 1 to 3, respectively.

The tool shown in [Figure 9.5](#) depicts these two dimensions in a matrix. The values of each pair of dimensions are multiplied to generate a numeric score. A score of 1 is the lowest risk, while a score of 9 indicates the greatest risk. Color-coding the scores highlights the degree of risk being borne.

Organizations' risk management strategies will vary depending on their tolerance for risk. Typically, scores of 6 or higher will warrant the creation of a contingency plan. A contingency plan is an alternative path, project or process that would be considered if the primary path is disrupted. A simple example would be a backup plan to print and distribute paper reports if the electronic distribution process is disrupted for longer than a preset amount of time. Within any one very large project, there are likely to be multiple smaller contingency plans to account for any individual event that may occur.

Risk management and business continuity planning are taking on great prominence in healthcare. Leaders have the responsibility to bring to light the full effects of system loss and the costs associated with mitigating those risks. The solutions are often expensive and will create considerable conversation, especially around the likelihood of any event happening.

Once a risk has been identified, a plan for risk mitigation is the next logical step. Risk mitigation helps the organization understand the risk and guides the organization to take steps to prevent a disaster. Risk mitigation should be applied to situations where both internal and external customers are involved. To mitigate internal customer risk, you might use a more collaborative approach, whereas to mitigate risk for an external customer, the process may be a bit more formal. For example, if the quality department identifies a risk, they typically work with the internal departments to prevent problems. If an external entity, a vendor for example, creates risk, then an organization must mitigate risk contractually or halt relations with the vendor.

Financial Risk Management

It is important for healthcare organizations to make sound decisions in order to manage financial and budget risks. Without a solid understanding of financial risks and their impact, they cannot be expected to make the right decisions

about their capital and operating investments. The fundamental idea behind managing financial risk in healthcare is to reduce and protect against the inherent unpredictability of future costs.

Enterprise risk management (ERM) is a proven methodology that organizations use to manage overall risk. While ERM has been used to address clinical, human resource and legal risks in the hospital setting, it has not been frequently applied to financial risk management. This could be due to the complex and highly specialized nature of the tax-exempt capital markets, which can be intimidating to many risk management professionals. Despite its complexity, financial risk can be handled in the same four steps as other forms of risk:

1. Identification—Listing financial risks that can occur as a result of either negative factors or favorable events (e.g., when unexpected success leads to exponentially increased demand for services)
2. Quantification—Assessing the likelihood or probability a risk-related event will occur and the magnitude of its impact
3. Risk response—Determination and implementation of a response to the risk, such as acceptance, transference, mitigation or avoidance
4. Monitoring—Continuous review of existing and future risks

Core financial skills are needed to reduce the risks associated with IT investments. Today's IT professionals should be knowledgeable about budgeting and planning; financial purchasing options, such as capitalized and depreciated assets; operating expenses; basic accounting principles and standards; financial models and methods; and compliance regulations. In addition, the IT professional should use a broad range of methods and tools, such as return on investment (ROI) calculations, budget-tracking tools, revenue creation reports, monthly financial reports and variances, technology pilots where available, SLAs to improve vendor performance and soliciting buy-in for IT initiatives from business and clinical unit executives to minimize and reduce IT procurement risks.

Budget Risk Management

Managing budgets is one of the basic disciplines that all managers must master. An organized approach to developing and maintaining the budget will go a long way in helping reduce risks. In addition, to prepare for the possibility that some risks will not be managed successfully, a risk contingency budget should be created. Funds from the risk contingency budget can then be used to prevent a project from going over budget.

For today's IT managers, having solid budgeting and forecasting skills is critical in reducing budget risk. Understanding the annual budget cycle is important, particularly in avoiding the fiscal year-end crises that often occur as organizations attempt to balance their budgets. The business requirements for expenses should be accurately assessed. The budget should be developed

in detail. At the line-item level, capital and operating expenditures should be differentiated and long-range capital planning should be identified. Capital expenditures are payments by the organization for fixed assets, such as buildings and equipment. Capital expenses are incurred when a company buys assets that have a useful life of more than one year and are typically depreciated. The long-range capital plan, which covers five years or more, should be the result of an executive review process that determines the proper mix of existing assets and new investments needed to fulfill the healthcare organization's mission, goals and objectives, and should reflect the priorities for the year. Operating expenditures are incurred in the course of ongoing, day-to-day business activities and include payments for rent, utilities, salaries and benefits, training, software maintenance fees and telecommunications. Operating expenses relate to items that have a useful life of one year or less and are not depreciated.

It is important for a consistent model or software system to be used to manage the budget. Budget risk can be addressed by paying attention to contracts and maintenance fee increases and by adjusting and reforecasting the expenditures. Healthcare organizations may be required to make budget reductions; therefore, maintaining multiple budget scenarios is important. These can be reserved for times when revenue is low, when critical enhancements are made or when revenue-generating projects are planned.

The following important steps should be considered when managing budgets²⁶:

- Negotiate an effective budget to start with. Spending the necessary time at the beginning of a project will eliminate budget challenges later in the project schedule.
- Plan for unexpected expenses. This will allow for flexibility should unforeseen expenses arise.
- Prepare early for year-end budget activities. Finalizing budgets at the end of the fiscal year is an important and time-consuming activity. It is best to start planning for this early or on an ongoing basis.
- Stay close to budget. Attempt to finish as close to budget expectations as possible and avoid being significantly over or under budget, as this will affect the following year's budget allocations.
- Account for cost allocations. Identify charges or transfers that may occur to or from other departments to your department.
- Understand the key budget numbers. Know all the critical numbers for your department and be aware if any of the numbers are wrong.

Roles and Responsibilities for IT-Related Functions

The increased adoption of technology in healthcare has greatly expanded the role of IT. In addition to traditional IT functions, healthcare IT has created exciting new roles and responsibilities. Healthcare IT is the area of IT involving

the design, development, creation, use and maintenance of information systems for the healthcare industry. Healthcare IT includes electronic coding, accounting and billing systems; electronic medical records (EMRs) or EHRs; and clinical or departmental applications, such as lab, radiology, pharmacy and nutrition. It includes support for ancillary systems such as cardiology and radiology. Clinics in the ambulatory space require practice management systems that handle appointment scheduling, billing and patient follow up.

IT-related careers in healthcare can be found in many different types of organizations. These include hospitals, physician clinics, payer organizations, health information exchanges (HIEs), community health centers, long-term care, ambulatory surgery centers and more. Health IT is also prevalent in educational institutions, academic medical centers, government agencies, the military, vendor organizations and consulting companies. Both general IT and healthcare IT roles exist in these organizations. Individuals with a clinical background who are interested in a career in healthcare IT will find excellent opportunities in many of the organizations listed above. To make the transition from clinical practice to IT or from general IT to healthcare IT can be challenging; however, those who do it successfully often thrive in their new careers. The HIMSS Professional Development Staff and associated professional development committees have created a document that contains job descriptions for health information technology professionals. This document can be found on the HIMSS web site in the Resource Center.

Senior Management Roles and Responsibilities

Board of director, executive management and medical executive committee support are essential for the success of IT in a healthcare organization. The CIO is generally the most senior-level IT executive. In many health systems, this role also carries the vice president or senior vice president designation. Additional IT executive leadership roles can include the CMIO, the chief nursing information officer (CNIO), the chief technology officer (CTO), the chief information security officer (CISO), chief health information officer (CHIO) and chief pharmacy information officer (CPIO). Second-level leadership typically entails IT department directors, clinical informaticists and physician and nurse champions. Recently, health systems have developed new roles, such as the chief innovation officer, chief applications officer, chief digital officer, chief experience officer, chief business development officer and chief privacy officer positions, to meet the dynamic and complex technology environment.

General IT Roles and Responsibilities

Healthcare organization IT departments are staffed with internal full-time employees (FTEs) or outsourced staff that support traditional IT-related roles. Job descriptions for these roles are categorized as senior level, midlevel and entry

level and typically include titles such as director, manager, architect, analyst, engineer, technician, administrator, programmer, analyst and developer. Common areas that these roles are responsible for are generally divided into three major sections. The infrastructure team is usually responsible for the data center, IT helpdesk, communications, database administration, backups, network support and IT security. The business group manages applications to support human resources, payroll, supply chain, finance, marketing and web development. Clinical applications teams support EHRs and all clinical ancillary applications. Technical integration teams support interfaces between all types of systems.

Healthcare IT Roles and Responsibilities

To meet the evolving technology demands of healthcare organizations, particularly considering the increased usage of EHRs, many clinical, business and project-related roles now require healthcare IT knowledge and a blend of healthcare business, clinical, management and technical experience. Some of the most in-demand clinical and business positions are analyst roles. These include specialty roles covering all categories of applications, administrative services, customer support, workflow analysis and configuration. Other important healthcare IT roles include informatics, clinical engineering, go-live events, implementation consulting, integration, project management, quality assurance, usability and human factors analysis. Trainers are crucial in healthcare for all personnel and all applications. Change management, transformation and IT communications teams are also becoming more common in healthcare institutions.

Staff Competency in Information and Management System Skills

With the myriad of roles in a typical healthcare IT department, it is important to consider professional development, training and competency for the applications supported. Some applications require professional certification in order to perform configuration within. Others require one-time certification. A solid plan for team development can reduce turnover and increase employee satisfaction.

Employee Development

Employee development is a key component in ensuring that healthcare IT staff attain the necessary competency in information and management system tools and skills. Mastering those skills, along with developing the soft skills needed to collaborate and work together as a team, is essential in ensuring the success of the organization. Staff improvement programs provide employees with the proficiencies and qualifications needed for advancement within the organization, and help staff form positive attitudes and interpersonal skills to work effectively.

Employee development can be provided through training and in-service programs, certification classes, community college or university educational courses, conferences and workshops, professional association involvement and self-study through books, industry magazines, videos and online resources. Effective leaders also provide opportunities for employees to mentor others or ask senior colleagues for mentorship. Shadowing an executive for a day can be an enriching experience for an employee. It is common practice to implement goals during the annual review process, adding a “stretch” goal or a goal to take someone out of their comfort zone gives the individual the opportunity to grow and learn.

Organizational Training and In-Service Programs

Training and in-service programs may originate from several sources. Human resources typically have responsibility for organization-wide training requirements (e.g., security and safety regulations, discriminatory practice and quality improvements). Supervisory, management and leadership development may be designed and offered by a leadership department within the organization or through human resources. The department or group in which an employee works provides programs such as in-service or online training. In addition, IT projects for information and management system deployments usually include a training budget for system developers, administrators and end users who will be supporting and using the product.

Job-Related IT Certifications

IT-based certifications have long been a mainstay of IT education and professional credentials. Certifications have two main advantages. First, they provide a framework by which technical staff can learn and gain a level of proficiency in a specific IT-related topic. Second, a certification provides the recipients with a credential showing they have a defined body of knowledge in a specific area. Although a certification by itself will not qualify a person for a new job or promotion, it does demonstrate that the individual has mastered either a basic or advanced level of a specific knowledge area and it is often viewed as a positive contributing factor in the decision of whom to hire. It is recommended that clinicians keep their clinical licensure and certifications active and up-to-date, even if they are no longer in a clinical role. Similarly, IT professionals should also consider keeping their IT certifications active, particularly those certifications that are in high demand in healthcare IT.

The Certified Professional in Healthcare Information and Management Systems (CPHIMSSM) certification is an essential credential for all healthcare IT management, management engineering and process improvement professionals, military personnel and consultants. Developed and sponsored through HIMSS, eligible candidates become certified by passing the CPHIMS examination. The

CPHIMS certification demonstrates an international standard of professional knowledge and competence in healthcare information and management systems. Similarly, HIMSS offers the Certified Associate in Healthcare Information and Management Systems (CAHIMSSM) certification allowing those who do not qualify for eligibility for the CPHIMS, an opportunity to demonstrate their professional knowledge.

New projects can bring a significant change to organizational workflows and processes. It is important to include change management in healthcare IT processes. The ADKARTM model for change emphasizes **awareness** of a project through communication, addressing the **desire** for change, creating **knowledge** around the change, understanding the customer's **ability** to change and **reinforcement** of why the change occurred and importance of keeping the change in place.⁴ ADKAR Change Management certification can be attained via a three-day course or a condensed one-day course.

Many of today's highly sought-after healthcare IT certifications can be obtained only by employees of organizations that are engaged in a specific vendor product deployment, such as an EHR or healthcare information systems project. However, healthcare systems also value generally available certifications, particularly if they are in the process of deploying related methodologies throughout their organization. These include certifications such as the Project Management Professional (PMP[®]), ITIL[®] and Lean Six Sigma.

Miscellaneous Professional Development

Healthcare IT professionals should consider other professional development and education opportunities. These are particularly useful in helping individuals become well rounded and remain current in the rapidly evolving healthcare environment. Employees are typically responsible for the costs of their professional development, but many companies pay for such education as a benefit of employment. Several of the more common sources of professional development are healthcare IT conferences and workshops; programs sponsored by national and local professional associations, such as HIMSS; university certificate programs and bachelor's, master's and doctorate degrees in healthcare IT, informatics, information management and information systems; and self- or group study using books, industry magazines or journals, videos and such online resources as white papers, webinars, conferences and training.

Performance Evaluation

Performance evaluation is an important tool that healthcare administrators can utilize to monitor and improve employee competencies. Performance evaluation is the ongoing process in which employees' work, outcomes, attitudes and interpersonal skills, professional growth and adherence to organizational values are assessed and feedback is provided. In the evaluation

process, the employee's actual performance is compared against the expected performance. In order to be effective and objective, the performance evaluation process must start with specific and measurable performance goals. The performance goals should be defined and communicated to the employee at the start of the year.

A variety of methods can be used in the performance evaluation process, the most common being the rating scale. The scales will specify personal traits and behaviors expected, such as teamwork, communication skills, adherence to values, dependability and initiative. Also specified will be specific job attributes, such as quality and quantity of work.²⁶ Each trait or behavior is accompanied by a range of numbers and words that the evaluator marks to indicate an employee's level of performance.

Some organizations use the 360-degree method of performance appraisal. In this method, other individuals are asked to rate the employee on specific criteria. Raters may include individuals who work with the employee on teams, subordinates, peers in the same department, employees in other departments and sometimes outside customers and vendors. The employee is also given the opportunity to perform a self-assessment. The results of all these assessments are taken into consideration in the final evaluation that is completed for the employee. In this process, it is important to provide confidentiality to the raters for the evaluations they provided.

During the performance appraisal process, it is important for the manager to provide feedback to employees at regular intervals during the year. Employees should never be surprised during a formal appraisal that they were found to be performing at a less than adequate level in some aspect of their role. Sub-par performance should be dealt with as soon as it is identified. This type of feedback gives the employee an opportunity to improve performance. Alternatively, if an employee is performing at an excellent or exceptional level, the interim positive feedback will help to preserve that positive behavior. Although interim reviews can be done formally or informally, it is advisable to complete a formal, written interim review if an employee's performance requires improvement.

When disciplinary action is needed, it must be taken based on clear facts and with documented justification. If disciplinary action is needed, it should be done progressively over time—starting with verbal discussions, then utilizing written and verbal communication and possibly ending with termination. This approach provides consistent communication to the employee about what needs to be done to resolve the problem. Communication may be oral at first. If the problem persists, documentation should be completed in the form of notes to the employee's personnel record and written warnings with substantive examples of the inadequate performance. At all steps during the process, it is advisable to communicate with and seek the advice from the human resources department.

Developing Educational Strategies for IT Staff

Leaders are hired due to a combination of their experiences and skills. They will likely select individuals to work for them based on similar criteria. The staff will continue to gain experience as they do their jobs, but there is very little opportunity for them to continue their education and expand their knowledge unless someone creates opportunities for them. Education can be provided in many ways and at relatively little overall cost.

At the very least, education needs to be valued. Commit to the time it will take for staff to complete further education and commit to supporting the cost of the education as well. Encourage staff to broaden their skills by taking opportunities to stretch their current skills or cross-train in areas that are beyond their current experiences. When it becomes tempting to reduce costs by eliminating educational support, also consider how much it will cost to recruit new staff and whether the skills sought are those the current staff may be lacking.

Initiate your educational support by creating low-cost educational opportunities for the staff. Ensure that staff members are signed up as members of all the vendor user groups, both locally and nationally. Take advantage of professional societies, interest groups and other local educational opportunities as well. Many of these organizations sponsor local presentations and educational dinner meetings as conveniences to their members. Professional associations, like HIMSS, offer both local and global membership. In many cases, education is free and is often available in multiple media formats so that individuals can attend in person or via webcasting, webinars and other telecasting options. Many vendors will also make free educational opportunities available to the staff.

When funds are available, consider having staff take turns attending vendors' user conferences or professional society conferences. That way, staff members can attend conferences every couple of years. Ask those staff who go to take time to explore specific educational sessions of interest to the whole organization. Upon the conference attendee's return, arrange for a team luncheon at which that person can report on information learned and share any gathered materials. Most societies and large user groups make their conference presentations available online, so it is very easy to share content with staff.

As noted earlier, succession planning is an important part of the overall IT planning process. An investment in education and the thoughtful application of the new skills expands the capabilities of the IT staff and helps to ensure a well-balanced, mature and knowledgeable department.

Current IT Technologies and Trends

The overall education of the IT team members extends beyond the applications they service and the immediate issues and objectives that are at hand. Team members need to stay connected to a variety of disciplines

related to their specific sphere of expertise. The greatest opportunity for this added education comes from within the organization itself. Listen to the feedback of colleagues and peers. Be engaged and ask questions to become more knowledgeable. So much of the work we do overlaps with the work of others. Knowledge will expand your effectiveness in the work you do.

Outside of your own colleagues, a valuable educational resource is the media and printed press. *The Guardian*, *Healthcare IT News*, *People's Daily* and the *Wall Street Journal* are often the first to pick up on and report trends or activities that have national or international significance in many disciplines. Take the time to review the headlines and articles in order to stay up on current events. Organizational leaders will be regularly asked to comment on materials in those publications.

Many publications now offer really simple syndication (RSS) or other services that will e-mail the headlines or article titles that align with subjects you are interested in. Given the option of being proactive or reactive, a successful leader will choose the former path.

Developing System, Operational and Department Documentation

With the vast amount of expertise required to manage healthcare applications, it is crucial that teams develop detailed documentation to create a knowledge base for auditing and use by teams. The documentation can be system, operational, or departmental in nature. This ensures that teams are organized, and that customers understand the IT process.

System Documentation

System documentation includes the documents that support analysis, decision making, acquisition and implementation processes. It also addresses system features and functional and technical requirements. Systems analysis documentation includes the information gathered in the process of “collecting, organizing, and evaluating data about IT system requirements and the environment in which the system will operate.”²⁷ It also includes documents such as functional requirements, design specifications, requests for information and proposals and related vendor responses. Also considered part of system documentation are procedure manuals, computer programs and machine operating manuals; details of standards compliance; and records of the initial system testing process and results (e.g., data collection and input procedures).

Operational Documentation

Operational documents relate to ongoing systems operations and maintenance. They include information about ongoing testing of systems and results, audit processes and database management, as well as training manuals. Operational documents also encompass implementation time frames, flowcharts and progress reports; data backup and recovery procedures; and system retirement, tuning and logistic support requirements.

Department Documentation

Department policies and procedures (P&Ps) help to guide the processes and actions employees should use to perform their work and are essential for healthcare organizations to achieve various accreditations. A department or organizational policy formalizes what is expected or required of employees, among other things. A procedure document describes how an outcome is to be accomplished. Therefore, policies and procedures serve two purposes: (1) they set performance requirements that can be used to motivate or discipline employees and (2) they serve as ongoing references for employees and orientation documents for new hires.²⁸ In developing P&Ps, the following steps are useful: (1) identify a need; (2) draft a policy or procedure that addresses the need; (3) get management approval; (4) distribute the approved document to employees and educate them on its contents; (5) revise, replace or withdraw the policy or procedure as needed; and (6) coordinate with human resources, corporate compliance or other areas when applicable.

Department P&Ps will address elements such as security (e.g., access control, entity authentication, audit trails, data encryption, firewall protection and virus checking), privacy protection (definitions of access rights and instructions for handling specific information and patients) and information retention and availability of medical information. In addition, communication of medical information, management of licensed software, handling of service requests, the IT strategic plan and the IT budget should be addressed. It is also important to consider change management, project management and process improvement; development methods and standards; and copyrights and ownership in department P&Ps.

Summary

Today's healthcare IT arena could be considered extreme by some. There is a movement towards innovation and disruptive technologies in our healthcare system that demands excellence in leadership and management. Healthcare organizations strive to lead with new technology and deliver the highest

quality care to patients. For an IT leader or manager, this means handling multiple projects and doing more with less. IT leaders must be experienced in strategic planning, complex reporting and dealing with internal and external customer relationships. IT leaders must manage risk, budgets and large teams of professional resources. New roles and responsibilities in healthcare IT are constantly emerging. Today's leaders require a blend of clinical and business awareness. They need experience in project management and change management to be successful. Stakeholder engagement using effective steering committees and monitoring customer satisfaction are critical for success.

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